

THREE NEW SPECIES OF CTENIOPINUS SEIDLITZ (COLEOPTERA, TENEBRIONIDAE, ALLECULINAE) FROM XIZANG, CHINA

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Abstract Three new species of the genus *Ctenipinus* Seidlitz, 1896, e.g. *C. semicircularis* sp. nov., *C. nigriepileuron* sp. nov. and *C. zayicus* sp. nov. from Xizang, are described in this paper. A key to the known species of *Ctenipinus* Seidlitz from Xizang is provided. Type specimens are deposited in the Museum of Hebei University, Baoding, China (HBUM).

Key words Coleoptera, Tenebrionidae, Alleculinae, *Ctenipinus*, new species, Xizang, China

The genus *Ctenipinus* Seidlitz, 1896 belongs to the tribe Omophlini (Coleoptera, Tenebrionidae, Alleculinae) and was erected based on the type species *Cistela altaicus* Gebler, 1830. Before this study, 44 species were described mainly from China and surrounding countries (Russia, Korea, Japan etc.). Of them, 30 species were recorded represent in China and took about 69.4% of the total world fauna. This paper reports three new species from Xizang (Tibet), China, e.g. *Ctenipinus semicircularis* sp. nov. from Zayü, *C. zayicus* sp. nov. from Zayü and *C. nigriepileuron* sp. nov. from Mainling. This study was mainly based on the specimens collected from Xizang in 2004 and 2005. Other species found from Xizang are *Ctenipinus fossulatus* (Pic, 1913), *C. semioccineus* Blair, 1922, *C. semirufus* Pic, 1923 and *C. borchmanni* Znojko, 1950. Thus, the number of species from Xizang are now seven. A key to Xizang species of the genus is given in the paper. The type specimens are deposited in the Museum of Hebei University, Baoding, China (HBUM).

Genus *Ctenipinus* Seidlitz, 1896

Ctenipinus Seidlitz, 1896: *Nat. ins. Deutschl.* 5 (2): 200; Reitter, 1906: *Verh. Nat. Ver. Braun.* 45: 116, 129; Borchmann, 1910: *Col. Cat.* 3: 49; Ogloblin, & Znojko, 1950: "Fauna U. S. S. R." Coleoptera, 18 (8): 1-133. Type species: *Cistela altaicus* Gebler, 1830.

Key to known species of *Ctenipinus* Seidlitz from Xizang, China

1. Elytra with punctate-striate irregular, with clutter reticulation ridges and crinkles 2
Elytra with punctate-striate regular 3
2. Body black, only abdomen red *C. fossulatus* Pic, 1913
Body black, elytra and posterior abdomen bright red
..... *C. semioccineus* Blair, 1922
3. Pronotum and elytra yellow 4
Pronotum and elytra partially red, black or dark red 6
4. All antennomeres reddish-brown 5

- Antennomeres 1-3 and base of antennomere 4 yellow, other parts black *C. semicircularis* sp. nov.
5. Head, palpi, antennae, pronotal margin, scutellum, coxae, trochanters, and ventral surface of body black; femurs and tibia light brown, tarsus brown; body covered with dense yellow hairs
..... *C. borchmanni* Znojko, 1950
Head, antennae, palpi and legs reddish-brown, elytra and ventral surface of body dark yellow *C. zayicus* sp. nov.
6. Body dark red; elytral sutural margin and epipleura black
..... *C. nigriepileuron* sp. nov.
Head and pronotum red, elytra and ventral surface of body sulphur yellow, abdomen dark *C. semirufus* Pic, 1923
- Ctenipinus semicircularis* sp. nov. (Figs 1-12, 33-34)

Male. Body yellow, apex of mandibles apical part of antennomeres 4-11 and visible abdominal sternites 4 and 5 black, posterior angles of visible abdominal ventrite 4 and apex of pygidium yellowish-brown in most specimens.

Labrum slightly trapezoid, anterior margin nearly straight, dorsal surface with punctures, each puncture with a seta. Anterior margin of clypeus straight. Eyes reniform, obviously protruding. Dorsal surface of head weakly convex, densely covered with regular punctures. Frontoclypeal suture arcuate, weakly impressed. Antennae extending beyond basal 1/3 of elytra; length ratio of antennomeres 1 to 11 as follows: 24.0 9.0 26.0 21.8 22.0 23.5 23.1 24.0 21.0 21.5 26.0. Inner margins of antennomeres 4 to 8 slightly laciniate processes, apical part of antennomere 11 strongly stragulate. Apical maxillary palpomere trapezoidal with outer margin 1.33 times the length of the inner margin.

Pronotum almost semicircular, 1.47-1.58 times as wide as long, widest at base, 1.51-1.61 times as wide as anterior margin, 2.05-2.19 times as wide as head. Lateral margins of pronotum gradually widening

The project is supported by the National Science Foundation of China (30870322), the National Science Foundation of Hebei University (2005Q30), the Ministry of Science and Technology of the People's Republic of China (2005DKA21402) and the Key Laboratory of Invertebrate Systematics and Application of Hebei Prov. (ISA2009).

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Received 11 May 2009, accepted 11 Nov. 2009.

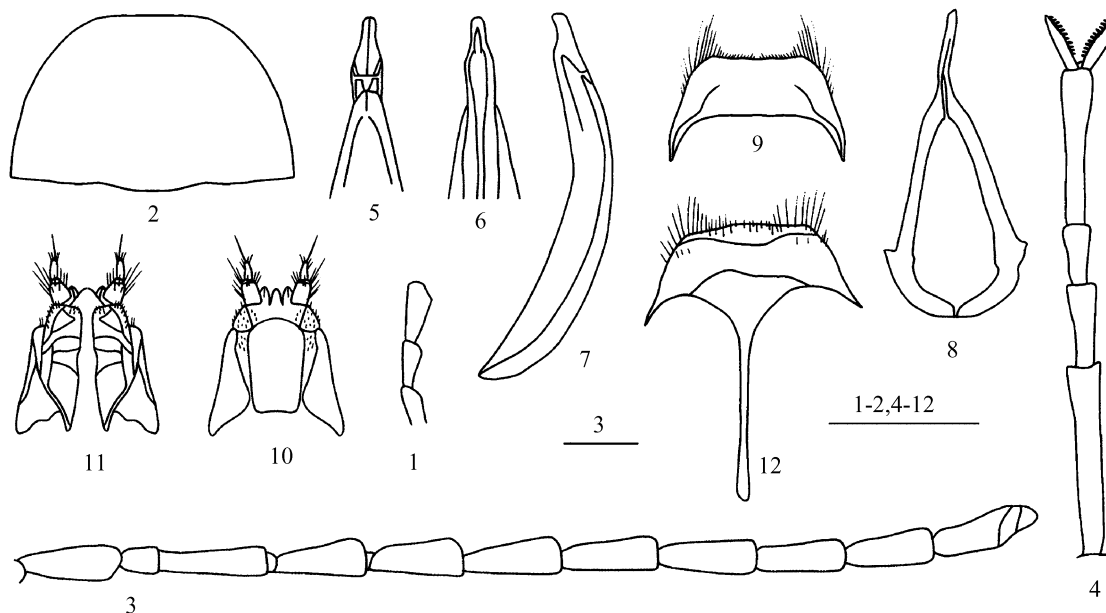
from anterior margin to base, finely bordered along entire length; anterior margin straight, broadly bordered along entire length. Anterior angle of pronotum nearly rounded, posterior one almost right-angled. Pronotal disc weakly convex, with dense punctures; median depression not extending to anterior and posterior margins

Scutellum triangular, with fine punctures

Elytra elongate-oval, 1.75-1.89 times as long as

wide and 1.35-1.47 times as wide as pronotum. Elytra with disc strongly convex, distinctly punctate-striate, intervals flat but finely punctate. Outer margins of epipleura not extending to humeri and apex of elytra, only middle part visible from above.

Legs moderately robust, femora compressed, tibiae nearly clavate. Length ratio of metatarsomeres 1-4 as follows: 51:20:15:32.



Figs 1-12 *Ctenipinus semicircularis* sp. nov. 1-9. Male 10-12. Female 1. Palpus of maxilla 2. Pronotum. 3. Antenna 4. Metatarsus 5-6. Apical part of aedeagus in dorsal and ventral view. 7. Aedeagus in lateral view. 8. Spiculum gastrale 9. Abdominal sternite of male 10-11. Ovipositor in dorsal and ventral view. 12. Spiculum ventrale. Scale bars = 1 mm.

Propleura concave, with obscure fine punctures. Intercoxal process of prosternum as high as fore coxae, steeply sloping at apical part, apex obviously extended, lamellate. Mesosternum obviously arcuate concave in front of the V-shaped area; longitudinal suture of metasternum not extending beyond posterior margin of hind coxae. Visible abdominal ventrites densely covered with obscure fine punctures, sides of ventrite 4 concave.

Aedeagus. Length 3.4 mm, width 0.62 mm, widest at base of basal piece. Spiculum gastrale as in Fig 8; abdominal sternite as in Fig 9.

Female. Body bigger. Ovipositor as in Figs 10-11. Spiculum ventrale as in Fig 12.

Body length: 11.1-12.4 mm, 12.0-13.1 mm. Body width: 4.3-4.8 mm, 5.3-6.1 mm.

Diagnosis. The new species is similar to *Ctenipinus flavipalpus* Bai et Ren, 2004, but can be distinguished from the latter by the body relatively large (11.1-12.4 mm); pronotum almost semicircular, anterior margin of labrum nearly straight.

Etymology. From the Latin, *semicircularis*,

meaning the semicircular pronotum.

Holotype, Xiazay Ü (28.49°N, 97.14°E; alt 1500-1580 m), Zay Ü Xizang, China, 12 July 2005, collected by SHI Aimin. Paratypes: 2, 2, same data as holotype; 2, 2, same data as holotype by 11 July 2005; 2, 2, same data as holotype by Shangzay Ü (28.49°N, 97.14°E; alt 1700-2000 m), 14 July 2005.

Distribution. China (Xizang).

Ctenipinus zayicus sp. nov. (Figs 13-22, 35)

Female. Head, antennae, palpi and legs reddish-brown, elytra and ventral surface of body dark yellow, ventral surface of body yellowish-brown in some specimens.

Labrum nearly cordiform, anterior margin sinuate and with long hairs, dorsal surface clearly covered with punctures. Anterior margin of clypeus straight or weakly prominent, lateral margins weakly arcuately protruding. Eyes slightly reniform, anterior margins with small grooves. Dorsal surface of head weakly convex, vertex with obscure comate punctures. Frontoclypeal suture weakly arcuate. Antennae

extending beyond basal 1/3 of elytra; length ratio of antennomeres 1 to 11 as follows: 11.0 7.5 25.0 20.0 20.0 22.0 23.0 26.0 26.0 26.0 31.0; apical part of antennomere 11 strongly stragulate. Apical maxillary palpomere trapezoidal with outer margin 1.34 times the length of the inner margin.

Pronotum 1.41-1.53 times as wide as long, base 1.58-1.71 times as wide as anterior margin, widest in middle, 1.77-1.91 times as wide as head. Lateral margins of pronotum arcuately narrowing to anterior margin and weakly arcuately narrowing to base, bordered along entire length; anterior margin straight, sides of base sinuate, both bordered along entire length. Anterior angle of pronotum rounded, posterior one nearly obtuse. Pronotal disc slightly convex, densely covered with obscure fine punctures; median depression absent.

Scutellum triangular or nearly linguiform.

Elytra elongate-oval, 1.75-1.91 times as long as wide, widest behind the middle, 2.09-2.21 times as wide as pronotum. Humeral angles of elytra rounded. Elytra with disc convex, intervals of punctate-striate flat densely covered with obscure fine punctures. Outer margins of epipleura not extending to apex of elytra, only base invisible from above.

Legs moderately robust. Femora compressed, covered with dense declinate hairs, gradually narrowing toward apex. Tibiae nearly clavate, protibiae slightly incurved, meso- and metatibiae straight. Metatibiae shorter than metatarsi. Length

ratio of metatarsomeres 1-4 as follows: 40 17 15 31.

Propodea densely covered with obscure fine punctures. Intercoxal process of prosternum nearly as high as fore coxae, steeply sloping at apical part, apex suddenly and obviously extended. Mesosternum obviously arcuate concave in front of the V-shaped area; longitudinal suture of metasternum blackish-brown, not extending beyond posterior margin of hind coxae. Visible abdominal ventrites with dense punctures, posterior margin of pygidium slightly prominent, truncate or weakly sinuate.

Ovipositor as in Figs 18-19; urotergite as in Fig 20; urosternite as in Fig 21; spiculum ventrale as in Fig 22.

Male Unknown.

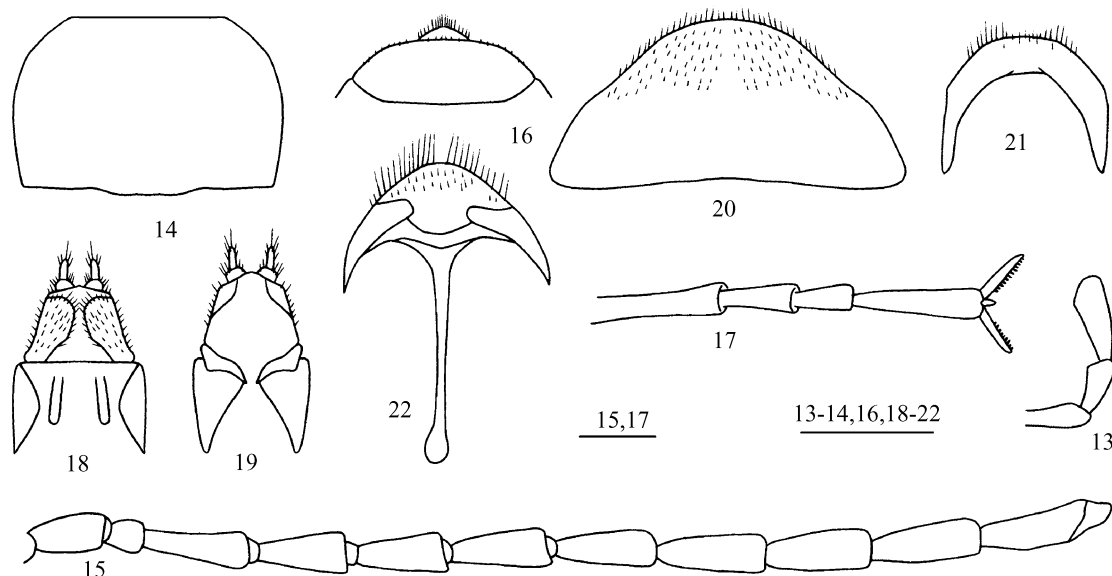
Body length: 10.8-13.2 mm. Body width: 4.7-5.4 mm.

Holotype, Mengkang (28.51°N, 98.32°E; alt 2440-3000 m), Zayü Xizang, China, 4 July 2005, SHI AiM in. Paratypes 5, same data as holotype.

Etymology. Named after the type locality.

Diagnosis. The new species is similar to *Ctenipinus antennatus* Ren et Bai, 2005, but can be distinguished from the latter by elytra dark yellow, antenna reddish-brown; apex of femora without black fleck; anterior margin and base of pronotum bordered along entire length.

Distribution. China (Xizang).



Figs 13-22. *Ctenipinus zaiyus* sp. nov., female. 13. Palpus of maxilla. 14. Pronotum. 15. Antenna. 16. Anal segment. 17. Metatarsus. 18-19. Ovipositor in dorsal and ventral view. 20. Urotergite of female. 21. Urosternite of female. 22. Spiculum ventrale. Scale bars = 1 mm.

Ctenipinus nigriepipleuron sp. nov. (Figs 23-32, 36)

Female. Body dark red; antenna brown, toward

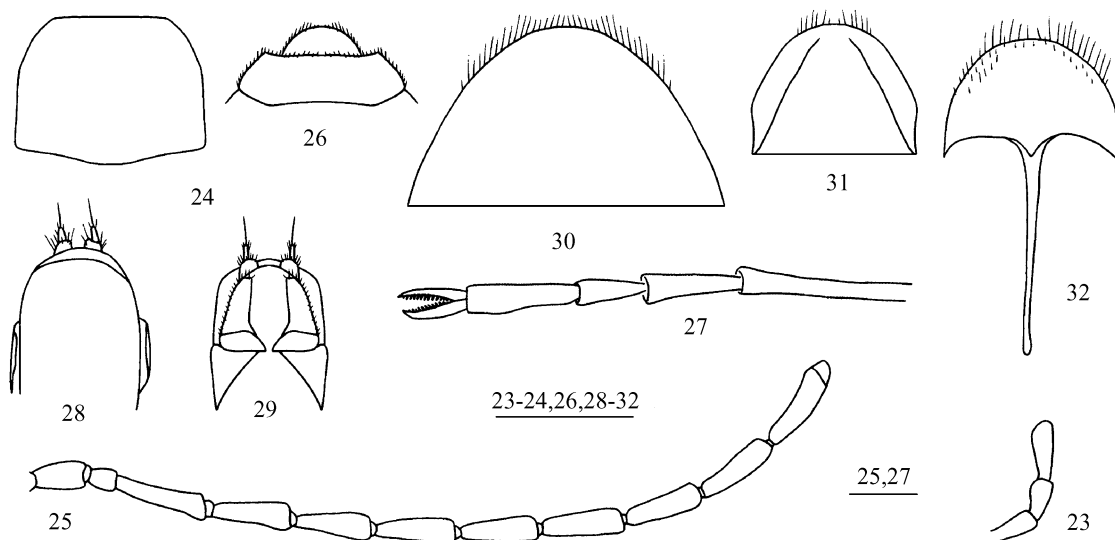
apex blackish-brown; palpi brown; head, pronotum and base of elytra mostly black; elytra with sutural margin and epipleura black; pro-, meso- and

metasternum and femur yellow to dark yellow; tibia and tarsi yellowish-brown; visible abdominal ventrites nut-brown, sometimes yellow.

Labrum nearly square, anterior margin weakly sinuate, lateral margins weakly arcuately protruding, anterior and lateral margins with long hairs, dorsal surface punctate. Anterior margin of clypeus straight. Eyes small, reniform, anterior margins with small concave. Dorsal surface of head weakly convex, vertex with dense punctures, denser on disc than on clypeus. Frontoclypeal suture arcuate. Antennae long and fine, extending beyond basal 1/3 of elytra; length ratio of antennomeres 1 to 11 as follows: 12 7 25 20 20 20 21 21 21 25; apical part of antennomere 11 strongly stragulate. Apical maxillary palpomere trapezoidal with outer margin 2.14 times the length of the inner margin.

Pronotum 1.17-1.28 times as wide as long, widest at base, 1.58-1.71 times as wide as anterior margin, 1.41-1.57 times as wide as head. Anterior 1/3 of lateral margins of pronotum arcuately converging to anterior margin, fine borders becoming obscure; posterior 2/3 of lateral margins of pronotum parallel-sided, finely bordered along entire length; anterior margin straight, base broadly lobed in middle, bordered along entire length. Anterior angle of pronotum rounded, posterior one nearly right-angled. Pronotal disc convex, with obscure punctures, denser in sides than on disc; median depression very weak or invisible.

Scutellum triangular, apex obtuse.



Figs 23-32 *Ctenipinus nigriepipleuron* sp. nov., female. 23. Palpus of maxilla. 24. Pronotum. 25. Antenna. 26. Anal segment. 27. Metatarsus. 28-29. Ovipositor in dorsal and ventral view. 30. Urotergite of female. 31. Urosternite of female. 32. Spiculum ventrale. Scale bars = 1 mm.

Diagnosis. The new species is similar to *Ctenipinus rubripes* Bai et Ren, 2003, but can be distinguished from the latter by the femur yellow to dark yellow, tibia and

elytra elongate-oval, 1.69-1.89 times as long as wide and 1.81-2.21 times as wide as pronotum. Elytra with disc weakly convex, striae punctation somewhat deep, intervals flat, densely covered with obscure fine punctures, each puncture with a declinate hair. Outer margins of epipleura not extending to shoulders and apex of elytra, only base invisible from above, surface obscurely covered with very fine punctures, each puncture with a seta.

Legs robust, femora compressed, tibiae nearly clavate. Upper spur of metatibiae noticeably larger than lower spur. Length ratio of metatarsomeres 1-4 as follows: 49 21 17 27.

Propleuron with very fine obscure comate punctures or comate granules. Intercoxal process of prosternum nearly as high as fore coxae or slightly higher, steeply sloping at apical part, very narrow but apex obviously extended. Mesosternum obviously arcuate concave in front of the V-shaped area; longitudinal suture of metasternum pitchy-brown, not extending beyond posterior margin of hind coxae. Visible abdominal ventrites densely covered with declinate hairs, posterior margin of pygidium truncate.

Ovipositor as in Figs 28-29; urotergite as in Fig 30; urosternite as in Fig 31; spiculum ventrale as in Fig 32.

Body length: 10.9-13.6 mm; width: 4.0-5.2 mm.

Male Unknown.

Etymology. From the Latin, *nigriepipleuron*, meaning the black epipleuron.

tarsi yellowish-brown; epipleura black; antennomere 9 almost as long as antennomere 11.

Holotype, Mainling (29.18°N, 94.13°E;

alt 3 000 m), Xizang, China, 20 June 2004, SHIAI Min and BAYIBin. Paratypes 10, same data as

holotype

Distribution. China (Xizang).



33



34



35



36

Figs 33-36 Four new species of the genus *Ctenipinus* 33. *Ctenipinus semicircularis* sp. nov. (). 34. *C. semicircularis* sp. nov. (). 35. *C. zayicus* sp. nov. (). 36. *C. nigripileuron* sp. nov. ().

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西藏栉甲属三新种记述 (鞘翅目, 拟步甲科, 朽木甲亚科)

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摘要 对中国西藏栉甲属 *Ctenipinus* Seidlitz 进行了分类整理, 给出已知种检索表, 描述 3 新种, 即: 半圆栉甲 *C. semicircularis* sp. nov., 察隅栉甲 *C. zayicus* sp. nov. 和黑缘栉甲 *C. nigripileuron* sp. nov.。模式标本均保存在河北大学博物馆。

半圆栉甲, 新种 *Ctenipinus semicircularis* sp. nov. (图 1~12, 33~34)

新种与黄须栉甲 *Ctenipinus flavipalpus* Bai et Ren, 2004 相似, 但可由下列特征与之区别: 个体明显大, 体长 11.1~12.4 mm; 前胸背板几乎半圆形; 上唇前缘近直。

正模, 西藏察隅下察隅, 1500~1580 m, 2005-07-12, 石爱民采。副模: 2, 2, 记录同正模; 2, 2, 西藏察隅下察隅, 1500~1580 m, 2005-07-11, 石爱民采; 2, 2, 西藏察隅上察隅, 1700~2000 m, 2005-07-14, 石爱民采。

词源: 新种种名以前胸背板几呈半圆形而拟定。

关键词 鞘翅目, 拟步甲科, 朽木甲亚科, 栉甲属, 新种, 西藏.
中图分类号 Q 969.498.2

察隅栉甲, 新种 *Ctenipinus zayicus* sp. nov. (图 13~22, 35)

新种与长角栉甲 *Ctenipinus antennatus* Ren et Bai, 2005 相似, 但可由下列特征与之区别: 鞘翅暗黄色, 触角红棕色; 腿节端部无黑斑; 前胸背板侧缘和基部具完整饰边。

正模, 西藏察隅门空, 2440~3000 m, 2005-07-04, 石爱民采。副模 5, 记录同正模。

词源: 新种种名以采集地为西藏察隅而拟定。

黑缘栉甲, 新种 *Ctenipinus nigripileuron* sp. nov. (图 23~32, 36)

新种与红足栉甲 *Ctenipinus rubipes* Bai et Ren, 2003 相似, 但可由下列特征与之区别: 腿节黄色至暗黄色, 胫节及跗节棕黄色; 鞘翅缘折黑色; 触角第 3 节与端节近等长。

正模, 西藏米林, 3000 m, 2004-06-20, 石爱民、巴义彬采。副模 10, 记录同正模。

词源: 新种种名以鞘翅缘折黑色而拟定。

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